

**Alloys of cyclo-olefin] polymers and polyolefin(s)****Publication number:** DE4213219**Publication date:** 1993-10-28**Inventor:** EPPLE ULRICH DR (DE); BREKNER MICHAEL-  
JOACHIM DR (DE)**Applicant:** HOECHST AG (DE)**Classification:**

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C08F297/08; C08J5/00; C08L23/02; C08L45/00;  
C08L53/00; C08L65/00; C08L23/00; C08F293/00;  
B32B27/32; C08F4/00; C08F297/00; C08J5/00;  
C08L23/00; C08L45/00; C08L53/00; C08L65/00;  
C08L23/00; (IPC1-7): C08F4/642; C08F4/646;  
C08J5/00; C08L53/00; C08F4/64; C08F4/68;  
C08F297/08; C08J3/20; C08L23/02; C08L45/00;  
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- **European:** C08F297/08; C08L45/00; C08L53/00; C08L65/00

**Application number:** DE19924213219 19920422**Priority number(s):** DE19924213219 19920422**Also published as:** RU2072363 (C1)[Report a data error here](#)**Abstract of DE4213219**

Producing polymer alloys (I) comprises combining finely divided cyclo-olefin copolymers (A) and finely divided poly-olefins (B) and processing the mixt. at elevated temp. under the action of shear forces. Block copolymers (A1) are prep. by (co)polymerisation of 0.1-95 wt.% monomer(s) of formula (IIA-F), 0-95 wt.% cyclo-olefin of formula (III) and 0-99 wt.% acyclic olefin(s) of formula (IV) at -78 to 150 deg.C and 0.01-64 bar in the presence of a catalyst system contg. a co-catalyst (C) and a metallocene (M); when the block copolymer has M2/Mn below 2, the monomer/comonomer ratio is changed by at least 10% or another monomer of formula (II-IV) is added, and the prod. is isolated. 0.1-99 wt.% (IA) is combined with 0-95 wt.% (B), 0-95 wt.% cyclo-olefin polymer contg. the above monomers which is not a block copolymer (A2), and opt. additives, and the mixt. is processed as above. Pref. (B) are poly-1-olefins, esp. polyethylene (PE), 0-50 pts. wt. HDPE, or polypropylene (PP), isotactic PP. (I) are made by combining 1-55 pts. wt. (A1), 10-80 pts. wt. (B) and 10-80 pts. wt. (A2), pref. with ratio (B)/(A1) = at least 1:1. (M) is a metallocene of formula (V) (where M1 = Ti, Zr, Hf, V, Nb or Ta; R14, R15 = H, halo, 1-10C alkyl or alkoxy, 6-10C aryl or aryloxy, 2-10C alkenyl, 7-40C aralkyl or alkaryl, or 8-40C aralkenyl; R16, R17 = mono- or poly-nuclear hydrocarbon residue which can form a sandwich structure with M1; R18 = M2R19R20-, -M2R19R20-M2R19R20-C(R21)2-, -CR19R20-, -O-M2R19R20-, CR19R20-CR19R20-, -BR19-, -A1R19-, -Ge-, -Sn-, -O-, -S-, -SO-, -SO2-, =NR19, =CO, =PR19 or =P(O)R19 (with R19-R21 = H, halo, 1-10C alkyl, alkoxy or fluoroalkyl, 6-10C aryl or fluoroaryl, 2-10C alkenyl, 7-40C aralkyl or alkaryl, or 8-40C aralkenyl, or R19/R20 or R19/R21 form part of a ring; M2 = Si, Ge or Sn).

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